



# Best Management Practices for Construction and Development Projects King Rail *Rallus elegans*

**Common name** • King Rail  
**Scientific name** • *Rallus elegans*  
**Federal status** • None  
**State status** • Endangered

## Purpose and Use

The information in this document is to be used to help avoid and minimize species impacts due to construction practices. It is not intended to be used as a guide to manage habitat for a given species. If that is the goal, please contact the Department of Conservation for habitat management information. Because every project and location differs, following the recommendations within this document does not ensure that impacts will not occur to the species and additional information might be required in certain instances. Following the recommendations within this document does not complete Endangered Species Act consultation that may be necessary for species listed under the federal Endangered Species Act; please contact the U.S. Fish and Wildlife Service for more information.

## Ecology

King Rails are permanent residents of the Atlantic and Gulf coastal plains from South Carolina to Texas. During the breeding season (as early as March to as late as August), some king rails migrate north to inland marshes in the Midwest, Great Lake and Mid-Atlantic States. Their habitat includes fresh and brackish wetlands. King rails prefer wetlands with abundant grasses, sedges, rushes and cattails interspersed with water. Rails tend to feed along the interface between water and vegetation; thus, wetlands with a high interspersed of water to emergent vegetation may maximize food availability. Additionally, the juxtaposition of different habitat types such as shallow flooded pools surrounded by emergent vegetation may yield an abundance of prey including aquatic and semiaquatic beetles, fish, mollusks and crustaceans. In Missouri, breeding begins in April, with males building nests in herbaceous cover over shallow water in river floodplains. Females typically lay 10-12 eggs, and both adults incubate the clutch for approximately 21 days. Young remain with adults for at least 30 days after hatching, at which time the young may migrate or remain in the area, but generally stay together as a brood.

## Reasons for Decline

Populations of the king rail have declined extensively since the early 1960s, especially in the northern, inland portion of their range. In Missouri, king rails were historically common in marshes along large rivers, but

they are now endangered and found at only a few locations in the state each year, primarily in wildlife refuges. Much of the decline can be directly related to conversion of wetland habitat for development. Spring and summer drawdowns to promote smartweeds may destroy king rail nests and habitat; however, late summer drawdowns that concentrate food resources can provide brood foraging habitat. In addition, water impoundments on rivers can affect channel flow and water regimes, altering wetland habitat and making it unsuitable for rails. Woody invasion of emergent marshes also has a negative effect on king rail site occupancy. Point and non-point source pollution also degrade water quality.

## Specific Recommendations

Maintaining existing habitats and efforts to restore and manage wetlands will benefit the king rail and the many other species that use this type of habitat.

- Avoid altering natural swales and other topographic features that are potential habitat for King Rails.
- Creation of microtopographic features that increase water to vegetation interspersed within wetlands may result in improved rail habitat.
- Dams and other impoundment structures should not be built in rivers within the range of this species.
- No work should occur below the high bank of streams or below water levels in wetlands between April 1 and July 15 to prevent disrupting breeding activities.
- Revegetate disrupted areas with native wetland species
- Draining or reducing known wetland habitat should be avoided within the range of the king rail.
- Control invasion of woody vegetation and invasive plants to maintain healthy habitat conditions.
- Erosion and sediment controls should be implemented, maintained and monitored for the duration of the project.

## General Recommendations

Refer to Management Recommendations for Construction Projects Affecting Missouri Wetlands and Management Recommendations for Construction Projects Affecting Missouri Rivers and Streams.

If your project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or

[www.modot.mo.gov/ehp/index.htm](http://www.modot.mo.gov/ehp/index.htm) for additional information on recommendations.

impacts may still occur. Please contact the appropriate agency for further coordination and to complete compliance requirements.

## Information Contacts

For information regarding regulations for development in wetlands, rivers and streams, contact:

For species information:

### Missouri Department of Conservation

Resource Science Division  
P.O. Box 180  
2901 W. Truman Blvd  
Jefferson City, MO 65102-0180  
Telephone: 573/751-4115

For species information and Endangered Species Act Coordination:

### U.S. Fish and Wildlife Service

Ecological Services  
101 Park Deville Drive, Suite A  
Columbia, MO 65203-0007  
Telephone: 573/234-2132

For Clean Water Act Coordination:

### Missouri Department of Natural Resources

Water Protection Program  
P.O. Box 176  
Jefferson City, MO 65102-0176  
Telephone: 573/751-1300, 800/361-4827

### U.S. Army Corps of Engineers

Regulatory Branch  
700 Federal Building  
Kansas City, MO 64106-2896  
Telephone: 816/983-3990

### U.S. Environmental Protection Agency

Water, Wetlands, and Pesticides Division  
901 North 5th Street  
Kansas City, KS 66101  
Telephone: 913/551-7307

## Disclaimer

These Best Management Practices were prepared by the Missouri Department of Conservation with assistance from state and federal agencies, contractors and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat. Compliance with these Best Management Practices is not required by the Missouri wildlife and forestry law nor by any regulation of the Missouri Conservation Commission. Other federal laws such as the Clean Water Act and the Endangered Species Act, and state or local laws need to be considered for construction and development projects, and require permits and/or consultation with the appropriate agency. Following the recommendations provided in this document will help reduce and avoid project impacts to the species, but